

Appl. No.: 10/048,157

June 30, 2004

Response to Final Action of February 6, 2004

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### REMARKS

Applicants acknowledge Examiner Davis' time and courtesy during the personal interview with Applicants' representative James E. Ruland on 24 June 2004. No exhibit was shown or demonstration conducted, and all the claims were discussed. Particularly, the rejections to claims 10-12 and 15 were discussed and Applicants acknowledged the allowance of claims 1-9 and the allowability of claims 13-14. No amendments were proposed and the specific prior art discussed was WO 99/22858 (British Nuclear Fuels). See Interview Summary of 24 June 2004.

Below is a summary of that interview.

#### Claim Rejection Under 35 U.S.C §112, Second Paragraph

Claim 10 stands rejected as allegedly being indefinite. Applicants respectfully traverse this rejection because claim 10 merely defines a species, namely 8-nitro-N-methoxycarbonyl-tetrahydroisochinolin, of a nitration product as defined in claim 1. Consequently, antecedent basis is provided for this claim and Applicants respectfully request that this rejection be withdrawn.

#### Claim Rejections Under 35 U.S.C §102(b)

Claims 11-12 and 15 stand rejected as allegedly being anticipated by British Nuclear Fuels. Applicants respectfully traverse these rejections.

British Nuclear Fuels fails to teach or suggest providing a reaction taking place in a homogenous liquid phase in a microreactor.

Rather, British Nuclear Fuels discloses a method of reacting an aromatic compound with a reacting agent, where the reacting agent is immiscible with the aromatic compound. Particularly, the nitration reaction is carried out without substantial mixing of the unreacted aromatic compound and the reacting agent. See page 1, lines 17-31 and page 4, lines 3-7, and Figs. 1-6. The building of a stable interface layer is essential for its continuous extraction process. See page 4, lines 3-7. Consequently, British Nuclear Fuels discloses a reaction being conducted in two phases which are immiscible and separated after leaving the mixer. See Figs. 1 and 2. There is no teaching or suggestion to modify British Nuclear Fuels to conduct this reaction in a homogenous phase.

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According to the present invention, it is possible to proceed with the reaction in a non-aqueous medium. As an example, mixing fuming nitric acid (100% by weight) with acetic anhydride or dichloromethane builds a homogeneous mixture suitable for this reaction. The kinetic conditions of this system are entirely different from the aqueous nitration systems of British Nuclear Fuels, because water decreases the reaction time. Also, as an example,  $N_2O_2$  in an organic solvent may be used for nitration in a homogeneous mixture. However, in a system such as that disclosed in British Nuclear Fuels consisting of an aqueous and organic phase, the  $N_2O_2$  would disassociate. As a consequence, both selectivity and yield of product would decrease considerably.

A further advantage of the present invention is that reaction can take place in a closed system under controlled conditions to mix intensely each element of volume during the whole reaction time, and thus, the volume pressure and temperature conditions are the same. Therefore, the danger of explosions can be avoided almost entirely.

In view of the above, favorable reconsideration is courteously requested. If there are any remaining issues which can be expedited by a telephone conference, the examiner is courteously invited to telephone counsel at the number indicated below.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,

  
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